

Tentative Constructions in Illumina v. BGI, No. 19-3770

Below are tentative constructions of the terms in dispute in the above matter. At the hearing on May 19, 2020, each party may have a total of one hour of argument. We will proceed first with the '537 and '200 patents and go term by term to the extent argument is desired. The parties may then address the '984 patent in the same fashion.

May 18, 2020

'537 and '200 patents

Claim Term	Agreed Construction		
"nucleotide"	"A 'nucleotide' consists of a nitrogenous base, a sugar, and one or more phosphate groups. The term nucleotide encompasses analogs and derivatives of nucleotides. A 'derivative' or 'analog' of a nucleotide means a compound or molecule whose core structure is the same as, or closely resembles that of, a nucleotide, but which has a chemical or physical modification, such as a different or additional side groups, which allows the derivative nucleotide to be linked to another molecule."		
"disulphide linkage"	A chemical linkage including an S-S bond		
Term	Illumina's Proposal	CGI's Proposal	Court's Tentative
"incorporating into the nucleic acid molecule"	No construction necessary	"using an enzyme to add, at the 3' end of the nucleic acid molecule"	"incorporating into the nucleic acid molecule at the 3' end"
"said protecting group can be modified or removed to expose a 3' OH group"	No construction necessary	Indefinite	No construction necessary
"[comprises/comprising] an azido group"	"an azido group is a chemical moiety of the structure C(R4)(R5) – N3 where R4 is H or alkyl and R5 is H or alkyl and 'alkyl' refers to groups	"includes at least an azido group (i.e. a group of three nitrogen atoms covalently linked, represented as (-N3))"	"includes at least an azido group (i.e. a group of three nitrogen atoms covalently linked, represented as (-N3))"

	having 1 to 8 carbon atoms”		
“nucleoside”	“A ‘nucleoside’ is structurally similar to a nucleotide, but are missing the phosphate moieties. The term nucleoside encompasses analogs and derivatives of nucleosides. A derivative or analog of a nucleoside is molecules whose core structure is the same as, or closely resembles that of, a nucleoside, but which has a chemical or physical modification, such as a different or additional side groups, which allows the derivative nucleoside to be linked to another molecule.”	“A ‘nucleoside’ consists of a nitrogenous base, a sugar, and there are no phosphate moieties attached to the sugar. The term nucleoside encompasses analogs and derivatives of nucleosides. A derivative or analog of a nucleoside is molecules whose core structure is the same as, or closely resembles that of, a nucleoside, but which has a chemical or physical modification, such as a different or additional side groups, which allows the derivative nucleoside to be linked to another molecule.”	“A ‘nucleoside’ is structurally similar to a nucleotide, but are missing the phosphate moieties. The term nucleoside encompasses analogs and derivatives of nucleosides. A derivative or analog of a nucleoside is molecules whose core structure is the same as, or closely resembles that of, a nucleoside, but which has a chemical or physical modification, such as a different or additional side groups, which allows the derivative nucleoside to be linked to another molecule.”

’984 Patent

Term	CGI’s Proposal	Illumina’s Proposal	Court’s Tentative
“DNA binding regions”	No construction necessary. <i>Alternative:</i> “spatially discrete regions for binding DNA”	“discrete, spaced apart regions that are sized to each bind at most a single DNA molecule”	No construction necessary.

“[more than 50% of the] DNA binding regions [in the array] ...”	No construction necessary.	“[more than 50% of the] DNA binding regions [in the array] are occupied by a single DNA molecule ...”	“[more than 50% of the] DNA binding regions [in the array] are occupied by a single DNA molecule ...”
“[more than 80% of the] DNA binding regions [in the array]...”	No construction necessary.	“[more than 80% of the] DNA binding regions [in the array] are occupied by a single DNA molecule ...”	“[more than 80% of the] DNA binding regions [in the array] are occupied by a single DNA molecule ...”
“more than 50% of the DNA binding regions in the array have multiple copies of one single DNA of said more than 10^5 different DNAs”	No construction necessary. <i>Alternative:</i> “Within the ‘more than 50%’ of DNA binding regions that have multiple copies of one single DNA, there may also be additional, different DNAs present.”	“more than 50% of the DNA binding regions in the array are occupied by a single DNA molecule comprising multiple copies of only one of the more than 100,000 genomic DNA sequences”	“more than 50% of the DNA binding regions in the array are occupied by a single DNA molecule comprising multiple copies of only one of the more than 100,000 genomic DNA sequences”
“more than 80% of the DNA binding regions in the array have multiple copies of the one single DNA”	No construction necessary. <i>Alternative:</i> “Within the ‘more than 80%’ of DNA binding regions that have multiple copies of one single DNA, there may also be additional, different DNAs present.”	“more than 80% of the DNA binding regions in the array are occupied by a single DNA molecule comprising multiple copies of only one of the more than 100,000 genomic DNA sequences”	“more than 80% of the DNA binding regions in the array are occupied by a single DNA molecule comprising multiple copies of only one of the more than 100,000 genomic DNA sequences”
“more than 10^5 different DNAs comprising genomic sequences”	No construction necessary. <i>Alternative:</i>	“more than 100,000 DNAs that each have a different genomic sequence”	“at least 100,001 DNAs that each have different genomic

	“more than 100,000 DNAs that have different genomic sequences”		sequences”
“array”	No construction necessary.	“a material or group of materials having a rigid or semi-rigid surface or surfaces, usually planar or substantially planar, which carries an array of sites containing nucleic acids, such that each member site of the array comprises identical copies of immobilized oligonucleotides or polynucleotides and is spatially defined and not overlapping with other member sites of the array; that is, the sites are spatially discrete”	“a solid phase support having a surface, usually planar or substantially planar, which carries an array of sites containing nucleic acids, such that each member site of the array comprises identical copies of immobilized oligonucleotides or polynucleotides and is spatially defined and not overlapping with other member sites of the array; that is, the sites are spatially discrete.”
“oligonucleotides”	No construction necessary. <i>Alternative:</i> “linear polymers of nucleotide monomers, in either single-stranded or double-stranded forms”	“linear polymers of nucleotide monomers”	“linear polymers of nucleotide monomers, in either single-stranded or double-stranded forms”
